

***Remarks***

Reconsideration of this Application is respectfully requested. Upon entry of the foregoing amendment, claims 1-24 are pending in the application, with claims 1, 9 and 18 being the independent claims. Independent claims 9 and 18 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested. Based on the above amendments and the following remarks, Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections, and that they be withdrawn.

**Rejections Under 35 U.S.C. § 103**

The Examiner rejected independent claims 1, 9 and 18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,385,773 to Schwartzman et al. ("Schwartzman") in view of U.S. Patent No. 5,499,189 to Seitz ("Seitz"). For at least the following two reasons, Applicant respectfully requests that the Examiner reconsider the rejections. First, Seitz is non-analogous art and reliance thereon is improper. Second, and notwithstanding the fact that reference to Seitz is improper, the combination of Seitz and Schwartzman still fails to teach or disclose each element of the independent claims.

**A. Seitz is Non-Analogous Art**

To properly combine references in making an obviousness rejection, the references must be taken from arts sufficiently analogous to application at hand. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then must be reasonably pertinent to the particular problem with which the inventor was concerned."

*In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992); MPEP § 2141.01(a). Two analogies drawn from the electrical arts are instructive.

In *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858 (Fed. Cir. 1993), the patent claims were directed to single in-line memory modules (SIMMs) for installation on a printed motherboard for use in personal computers, and used dynamic random access memories (DRAMs). The reference upon which the examiner attempted to rely was to a SIMM for use in large industrial machine controllers, and used only static RAM or ROM memories. The examiner argued that the reference was in the same field of endeavor because it related to memories. The Federal Circuit found the reference to be non-analogous.

In *Medtronic, Inc. v. Cardiac Pacemakers*, 721 F.2d 1563 (Fed. Cir. 1983), the patent claims were drawn to a cardiac pacemaker which comprised, among other components, a runaway inhibitor means for preventing a pacemaker malfunction from causing pulses to be applied at too high a frequency rate. The two references upon which the examiner relied disclosed circuits used in high power, high frequency devices. Those devices were used to inhibit the runaway of pulses from a pulse source. The Federal Circuit held that one of ordinary skill in the pacemaker design art faced with the rate-limiting problem would look to solutions of others faced with rate limiting problems, and therefore the references were in an analogous art.

Taken together, *Wang* and *Medtronic* illustrate that a reference must either be in the field of applicant's endeavor or, if not, then must be reasonably pertinent to the particular problem with which the inventor was concerned. As explained below, the Seitz reference meets neither of these criteria.

The present application indicates the inventor was working in the communications field. The present application is generally related "to shared access RF networks" (App., ¶ 0003), and more particularly to cable modem technology (App., ¶ 0013). The problem with which the present inventor was concerned, was how to most efficiently deal with different types of noise in network communication paths. (App., ¶¶ 0007-11.) As characterized by the inventor, "[w]hat is needed . . . is a system and method to detect and characterize interference on a communications channel so that only necessary adaptation techniques are applied, and then in a manner that optimizes network efficiency for the required level of robustness." (App., ¶ 0012.)

Seitz, on the other hand, indicates the inventor was working in the electric utility and power transmission field to eliminate a potential external source of RF interference--namely, sparking power transmission lines. The problem with which Seitz was concerned was how to efficiently detect sparking in power transmission lines. (Seitz, col. 1, l. 22 - col. 2, l. 5.) "Electric utility companies often have crews of troubleshooters who utilize radio receivers and directional antennas to locate sparking power lines so they might be repaired. In this way, interference to radio and television equipment can be traced and eliminated." (Seitz, col. 1, ll. 40-45.) Seitz realized that "[a] hindrance to such tracing of sparking power lines is that power lines are not the only sources of electrical sparks. Vehicle ignition systems (e.g., 'spark' plugs) also produce spark noise that generates similar RF interferences." (Seitz, col. 1, ll. 45-50.) Seitz was concerned with overcoming this problem. Indeed, the preferred embodiment is an "apparatus . . . typically used by employees of a utility company to identify a particular location in the

field at which a power line may be sparking. The apparatus is preferably embodied in a hand-held instrument for portability in the field." (Seitz, col. 3, ll. 21-25.)

As can be seen, Seitz and the present application are in different fields of endeavor, and are directed to different problems within those fields. The present invention relates to communication and cable modem technology, while Seitz relates to electric utility and power transmission technology. The present application seeks to efficiently deal with noise in communications networks, while Seitz seeks to efficiently locate sparking power transmission lines. One of skill in the art, confronted with the problems facing the current applicant, would not reasonably turn to Seitz for guidance. For these reasons, Applicant believes that Seitz is non-analogous art and that the Examiner's reliance thereon is misplaced.

**B. The Combination of Seitz and Schwartzman is Deficient**

Notwithstanding the Examiner's improper reliance on Seitz, Applicant believes that the combination of Seitz and Schwartzman fails to teach each element of independent claims 1, 9 and 18.

**1. Independent Claim 1**

The combination of Seitz and Schwartzman fails to teach each element of independent claim 1. As the Examiner recognizes, "Schwartzman fails to teach that the impairment types include at least one non-periodic impairment type and one periodic impairment type." (Office Action, p. 2-3.) For this reason, logically, Schwartzman also does not teach "adapting operating parameters of the communication system in accordance with said characterization of said impairment [e.g., non-periodic or periodic impairment]."

Seitz does not correct this deficiency. Seitz essentially recognizes that power line sparking creates a wideband radio frequency (RF) signal that has certain identifiable characteristics. Namely, that the sparks are "correlated to a 60 Hz power signal cycle" (Seitz, col. 2, ll. 32-35), and that "during each half cycle, a series of several closely spaced sparks typically occur" (Seitz, col. 2, ll. 1-5). In essence, the method of Seitz identifies the characteristics of the desired power line sparking signal, and blanks (eliminates) those signals that do not match those characteristics. As characterized by Seitz, "[t]hus implemented, the present invention enhances the radio frequency interference caused by power line sparks while blanking non-periodic and periodic noise from other sources." (Seitz, col. 2, ll. 60-63.)

The mere identification and elimination of signals not having certain periodicity characteristics does not teach or suggest "adapting operating parameters of the communication system in accordance with said characterization of said impairment [e.g., non-periodic or periodic impairment]" as recited in independent claim 1. For at least this reason, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of independent claim 1. Because claims 2-5, 7 and 8 depend from claim 1, Applicant likewise requests that the rejection of these claims also be reconsidered and withdrawn.

**2. *Independent Claims 9 and 18.***

Independent claim 9 has been amended to add the feature that the "processor adapts operating parameters of the communication system in accordance with said characterization of said impairment." Similarly, independent claim 18 has been amended

to add the feature that the "processing means adapts operating parameters of the communication system in accordance with said classification of said impairment."

For reasons substantially identical to those recited above with respect to independent claim 1, Applicant believes that neither Schwartzman nor Seitz teach or otherwise disclose adapting operating parameters of the communication system depending on the classification of an impairment as non-periodic or periodic. For at least this reason, Applicant respectfully requests that the Examiner reconsider the rejection of independent claims 9 and 18, and that the rejection of these claims be withdrawn. Because dependent claims 10-15, and 17 depend from independent claim 9, and because dependent claims 19, 20 and 22-24 depend from independent claim 18, Applicant similarly requests that the rejection of these claims be reconsidered and withdrawn.

***Other Matters***

Applicant wishes to thank the Examiner for an early indication of allowable subject matter with respect to claims 6, 14 and 21. Should the Examiner be persuaded by any of the foregoing remarks, Applicants respectfully request that the objection to claims 6, 14 and 21 be withdrawn.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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